**IN THE CLAIMS**

1. (Currently Amended)      A method for correcting a color image composed of a plurality of individual colors, the method comprising the steps of:

correcting the gamut of the color image; and

smart clipping the corrected image by "adding white" to out-of-gamut digital data of the color image, wherein said **smart** clipping comprises the steps of:

adjusting said individual colors of said out-of-gamut digital data by linearly scaling said individual colors based on a smallest value of said digital data individual colors, wherein said adjusted smallest value is set to a known value within said gamut of the color image **by subtracting a value equal to the of the out-of-gamut data from said individual colors**; and

scaling said adjusted colors to a maximum value based on a maximum value of one of said adjusted colors **by multiplying said individual colors by a ratio of the maximum value of the gamut of the color image to the maximum linearly scaled adjusted color**.

2. (Original)   The method of claim 1, wherein the smart clipping step of "adding of white" further comprises the step of scaling with the brightness of digital data having dark digital data get less white added than bright digital data.

3. (Original)      The method of claim 1, further comprising the step of reducing overall brightness of the color image.

4. (Original)      The method of claim 3, wherein said reducing step further comprises the step of multiplying digital image data of the color image by a fixed value of 0.85.

5. (Original)      The method of claim 3, wherein said reducing step further comprises the step of determining the reduction as a function of an input gamut and a display gamut.

6. (Original)      The method of claim 3, wherein said reducing step further

comprises the step of determining the reduction as a function of a saturation of the incoming signal.

7. (Original)            The method of claim 6, wherein said function is 0 when the saturation is equal to 0, maximal when the saturation greater than 0.75, and equal to a monotonically increasing function as a function of the saturation when the saturation is in the range between 0 and 0.75.

8. (Previously amended)       The method of claim 1, further comprising the steps of:

performing a gamma correction on the digital image data before the step of correcting the gamut; and

performing an inverse gamma correction on the smart clipped image.

9. (Original)            The method of claim 8, further comprising the step of reducing the overall brightness of the color image.

10. (Original)           The method of claim 9, wherein said reducing step further comprises the step of determining the reduction as a function of a saturation of the incoming signal.

11. (Original)           The method of claim 10, wherein said function is 0 when the saturation is equal to 0, maximal when the saturation greater than 0.75, and equal to a monotonically increasing function as a function of the saturation when the saturation is in the range between 0 and 0.75.

12. (Currently Amended)      An apparatus for primary color correction and clipping, comprising:

a means for receiving digital data of a color image having a source gamut;

a display having a display gamut;

one of a program memory storing and a calculation logic device providing-

(i)      a plurality of algorithms, that includes smart clipping algorithms, for mapping the source gamut to the display gamut, and

(ii)     a multi-step 'smart' clipper module that executes the plurality of

algorithms for mapping the source gamut to the display gamut; and

a controller/processing unit configured to

control receipt of the digital data,

execute the 'smart' clipper module to accomplish mapping the source gamut to the display gamut for the received digital data, wherein said clipping comprises the steps of:

adjusting said individual colors of said out-of-gamut digital data by linearly scaling said individual colors based on a smallest value of said digital data individual colors, wherein said adjusted smallest value is set to a known value within said display gamut **by subtracting a value equal to the of the out-of-gamut data from said individual colors**; and

scaling said adjusted colors to a maximum value based on a maximum value of one of said adjusted colors **by multiplying said individual colors by a ratio of the maximum value of the gamut of the color image to the maximum linearly scaled adjusted color**, and

output the mapped digital data to the display.

13. (Original)      The apparatus of claim 12, further comprising a storage device for storing received digital data and output digital data of a color image.

14. (Previously amended)    The apparatus of claim 13, wherein the plurality of algorithms comprises at least one of:

executable gamma correction algorithms;

gamut mapping algorithms to reduce brightness of digital data of a color image;

smart clipping algorithms to correct digital data of a color image by "adding white" to out-of-gamut digital data of the color image; and

saturation dependent attenuation algorithms.

15. (Original)      The apparatus of claim 13, wherein the smart clipping algorithms further comprise magnifying the clipping effect based on intensity of digital data of the color image.

16. (Previously amended)    The apparatus of claim 12, wherein the plurality of algorithms comprises at least one of:

executable gamma correction algorithms;

gamut mapping algorithms to reduce brightness of digital data of a color image;

smart clipping algorithms to correct digital data of a color image by "adding white" to out-of-gamut digital data of the color image; and

saturation dependent attenuation algorithms.

17. (Original)         The apparatus of claim 16, wherein the smart clipping algorithms further comprise magnifying the clipping effect based on intensity of digital data of the color image.

18. (Currently Amended)         A 'smart' clipper apparatus for primary color correction and clipping, comprising:

a plurality of algorithms, that includes at least a smart clipping algorithms that "adds white" to out-of-gamut digital data of the color image, adjusts said individual colors of said out-of-gamut digital data by linearly scaling said individual colors based on a smallest value of said digital data individual colors, wherein said adjusted smallest value is set to a known value within said gamut of the color image **by subtracting a value equal to the of the out-of-gamut data from said individual colors**, and scaling said adjusted colors to a maximum value based on a maximum value of one of said adjusted colors **by multiplying said individual colors by a ratio of the maximum value of the gamut of the color image to the maximum linearly scaled adjusted color**, for mapping a source gamut to a display gamut, and

a multi-step 'smart' clipper module that executes said plurality of algorithms.

19. (Previously amended)     The 'smart' clipper apparatus of claim 18, wherein the plurality of algorithms comprises at least one of:

executable gamma correction algorithms;

gamut mapping algorithms to reduce brightness of digital data of a color image;

smart clipping algorithms to correct digital data of a color image by "adding white" to out-of-gamut digital data of the color image; and

saturation dependent attenuation algorithms.

20. (Original)         The 'smart' clipper apparatus of claim 19, wherein the smart

clipping algorithms further comprise magnifying the clipping effect based on intensity of digital data of the color image.


21. (Previously amended)        A computer readable medium, comprising instructions accessed by a processor for causing said processor to execute:

a plurality of algorithms, that includes smart clipping algorithms, for mapping a source gamut to a display comprising:

executable gamma correction algorithms;

gamut mapping algorithms to reduce brightness of digital data of a color image;

smart clipping algorithms to correct digital data of a color image by "adding white" to out-of-gamut digital data of the color image, wherein said clipping comprises the steps of:

adjusting said individual colors of said out-of-gamut digital data by linearly scaling said individual colors based on a smallest value of said digital data individual colors, wherein said adjusted smallest value is set to a known value **by subtracting a value equal to the of the out-of-gamut data from said individual colors**; and

scaling said adjusted colors to a maximum value based on a maximum value of one of said adjusted colors **by multiplying said individual colors by a ratio of the maximum value of the gamut of the color image to the maximum linearly scaled adjusted color**, and

a multi-step 'smart' clipper module that executes said plurality of algorithms.


22. (Cancelled)


23. (Previously amended)     The computer readable medium of claim 21, wherein the smart clipping algorithms further comprise magnifying the clipping effect based on intensity of digital data of the color image.